

Amendments to the Claims

Please amend the claims as follows:

1. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent at about 0.02-1.5 % by wt and an antimicrobial agent at about 0.005-0.3 % by wt and selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, a solvent at about 90-99 % by wt, and an amount of buffering agent for a pH of about 5-6.5, the % by wt based on the total weight of the composition.
2. (original) The cleaning composition of Claim 1, wherein the cleaning agent comprises a hydroxycarboxylic acid, a hydroxycarboxylic acid salt, or a mixture thereof.
3. (original) The cleaning composition of Claim 2, wherein the cleaning agent comprises a hydroxycarboxylic acid selected from the group consisting of citric acid, malic acid, tartaric acid, glycolic acid, lactic acid, and tartronic acid.
4. (original) The cleaning composition of Claim 2, wherein the cleaning agent comprises a hydroxycarboxylic acid salt selected from the group consisting of a citric acid salt, malic acid salt, tartaric acid salt, glycolic acid salt, lactic acid salt, and tartronic acid salt.
5. (original) The cleaning composition of Claim 2, wherein the cleaning agent is selected from the group consisting of citric acid and citric acid salts.
6. (original) The cleaning composition of Claim 5, wherein the cleaning agent comprises a citric acid salt selected from the group consisting of ammonium citrate, and a tetraalkylammonium citrate.
7. (canceled)

8. (withdrawn) The cleaning composition of Claim 1, wherein the antimicrobial agent comprises a benzoic acid salt selected from the group consisting of ammonium benzoate, potassium benzoate, and tetraalkylammonium benzoate.

9. (previously presented) The cleaning composition of Claim 1, wherein the antimicrobial agent comprises a sorbic acid salt selected from the group consisting of ammonium sorbate, potassium sorbate, and tetraalkylammonium sorbate.

10. (previously presented) The cleaning composition of Claim 1, wherein the antimicrobial agent is selected from the group consisting of benzoic acid, sorbic acid, ammonium benzoate, potassium benzoate, tetraalkylammonium benzoate, potassium sorbate, ammonium sorbate, and tetraalkylammonium sorbate.

11-16. (canceled)

17. (previously presented) The cleaning composition of Claim 1, wherein the buffering agent is selected from the group consisting of ammonium hydroxide, and tetraalkylammonium hydroxide.

18. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: a cleaning agent selected from the group consisting of hydroxycarboxylic acids and salts thereof, an antimicrobial agent in an amount effective to inhibit microbial growth in the cleaning composition and selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, solvent at about 90-99 % by wt, and an amount of a pH buffering agent for a pH of about 5 to about 6.5, the % by wt based on the total weight of the composition.

19. (original) The cleaning composition of Claim 18, wherein the cleaning agent is selected from the group consisting of citric acid, malic acid, tartaric acid, glycolic acid, lactic acid, tartronic acid, and salts thereof.

20. (original) The cleaning composition of Claim 19, wherein the cleaning agent is selected from the group consisting of citric acid, ammonium citrate, and tetraalkylammonium citrate.

21. (withdrawn) The cleaning composition of Claim 18, wherein the antibacterial agent comprises a benzoic acid salt selected from the group consisting of ammonium benzoate, potassium benzoate, and tetraalkylammonium benzoate.

22. (original) The cleaning composition of Claim 18, wherein the antibacterial agent comprises a sorbic acid salt selected from the group consisting of potassium sorbate, ammonium sorbate, and tetraalkylammonium sorbate.

23. (original) The cleaning composition of Claim 18, wherein the solvent is selected from the group consisting of water, and an organic solvent.

24. (original) The cleaning composition of Claim 23, wherein the solvent comprises deionized water.

25. (withdrawn) The cleaning composition of Claim 23, wherein the solvent comprises an organic solvent selected from the group consisting of methanol, ethanol, n-propanol, iso-propanol, n-butanol, t-butanol, sec-butanol, ethylene glycol, and propylene glycol.

26-27. (canceled)

28. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of a cleaning agent selected from the group consisting of citric acid and a citric acid salt, an effective amount of an antimicrobial agent at about 0.005-0.3 % by wt to inhibit microbial growth in the cleaning composition and selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, solvent at about 90-99 % by wt, and an amount of a pH buffering agent for a pH of about 5 to about 6.5, the % by wt based on the total weight of the composition.

29. (withdrawn) The cleaning composition of Claim 28, wherein the antimicrobial agent comprises a benzoic acid salt selected from the group consisting of ammonium benzoate, potassium benzoate, and tetraalkylammonium benzoate.

30. (original) The cleaning composition of Claim 28, wherein the antimicrobial agent comprises a sorbic acid salt selected from the group consisting of ammonium sorbate, potassium sorbate, tetraalkylammonium sorbate.

31. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: a cleaning agent capable of dispersing alumina or silica slurry particles and supporting microbial growth in an amount of about 0.02-1.5 % by wt, an antimicrobial agent present in an amount of about 0.005-0.3 % by wt being effective to inhibit bacterial growth in the cleaning composition and on the surface of the substrate when the composition is applied thereto, effective amounts of one or more of a surfactant, buffering agent, corrosion inhibitor, chelating agent, oxidizing agent[[],] and antioxidant, and about 90-99 % by wt solvent, the composition having a pH of about 5-6.5, wherein the antimicrobial agent is selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, the % by wt based on the total weight of the composition.

32. (original) The cleaning composition of Claim 31, wherein the cleaning agent comprises a hydroxycarboxylic acid selected from the group consisting of a hydroxycarboxylic acid, and hydroxycarboxylic acid salts.

33. (original) The cleaning composition of Claim 32, wherein the cleaning agent is selected from the group consisting of citric acid, malic acid, tartaric acid, glycolic acid, lactic acid, and tartronic acid.

34. (original) The cleaning composition of Claim 32, wherein the cleaning agent comprises citric acid or a salt thereof.

35. (original) The cleaning composition of Claim 34, wherein the cleaning agent comprises a citric acid salt selected from the group consisting of ammonium citrate, and tetraalkylammonium citrate.

36. (original) The cleaning composition of Claim 35, wherein the cleaning agent comprises tetramethylammonium citrate.

37. (original) The cleaning composition of Claim 31, wherein the antimicrobial agent is selected from the group consisting of benzoic acid, sorbic acid, ammonium benzoate, potassium benzoate, tetraalkylammonium benzoate, ammonium sorbate, potassium sorbate, and tetraalkylammonium sorbate.

38-41. (canceled)

42. (previously presented) A cleaning composition for a semiconductor surface, comprising an aqueous composition consisting essentially of:

about 0.02 to about 1.5 % by weight cleaning agent;

about 0.005 to about 0.3 % by weight antimicrobial agent selected from the group consisting of benzoic acid, sorbic acid, and salts thereof;

an effective amount of at least one of a surfactant, buffering agent, corrosion inhibitor, chelating agent, oxidizing agent, and antioxidant; and

the balance solvent;

the composition having a pH of about 5-6.5, and the % by weight based on the total weight of the cleaning composition.

43. (original) The cleaning composition of Claim 42, wherein the cleaning agent is selected from the group consisting of hydroxycarboxylic acids and salts thereof.

44. (original) The cleaning composition of Claim 43, wherein the cleaning agent is selected from the group consisting of citric acid, malic acid, tartaric acid, lactic acid, glycolic acid, tartronic acid, and salts thereof.

45. (original) The cleaning composition of Claim 43, wherein the cleaning agent is selected from the group consisting of citric acid, ammonium citrate, and tetraalkylammonium citrate.

46. (canceled)

47. (withdrawn) The cleaning composition of Claim 42, wherein the antimicrobial agent is selected from the group consisting of benzoic acid, sorbic acid, ammonium benzoate, potassium benzoate, tetraalkylammonium benzoate, ammonium sorbate, potassium sorbate, and tetraalkylammonium sorbate.

48-49. (canceled)

50. (previously presented) The cleaning composition of Claim 42, wherein the amount of the cleaning agent is about 0.05 to about 0.5 % by weight, and the amount of the antimicrobial agent is about 0.01 to about 0.2 % by weight.

51. (previously presented) A cleaning composition for a semiconductor surface, comprising an aqueous mixture consisting essentially of:

about 0.02 to about 1.5 % by weight cleaning agent selected from the group consisting of hydroxycarboxylic acids and salts thereof;

about 0.005 to about 0.3 % by weight of a first antimicrobial agent selected from the group consisting of benzoic acid and salts thereof;

about 0.005 to about 0.3 % by weight of a second antimicrobial agent selected from the group consisting of sorbic acid and salts thereof; and

the balance solvent;

the composition having a pH of about 5-6.5, and the % by weight based on the total weight of the cleaning composition.

52. (previously presented) A cleaning composition for a semiconductor surface, consisting essentially of:

about 0.02 to about 1.5 % by weight citric acid, citric acid salt, or a mixture thereof;
about 0.005 to about 0.3 % by weight benzoic acid, benzoic salt, or a mixture thereof;
about 0.005 to about 0.3 % by weight sorbic acid, sorbic acid salt, or a mixture thereof;

and

the balance solvent;

the composition having a pH of about 5-6.5, and the % by weight based on the total weight of the cleaning composition.

53. (original) The cleaning composition of Claim 52, wherein the solvent comprises deionized water.

54. (previously presented) A cleaning composition for a semiconductor surface, consisting essentially of:

about 0.02 to about 1.5 % by weight of a cleaning agent selected from the group consisting of citric acid, ammonium citrate, and tetraalkylammonium citrate;

about 0.005 to about 0.3 % by weight of a first antimicrobial agent selected from the group consisting of benzoic acid, potassium benzoate, ammonium benzoate, and tetraalkylammonium benzoate;

about 0.005 to about 0.3 % by weight of a second microbial agent selected from the group consisting of sorbic acid, potassium sorbate, ammonium sorbate, and tetraalkylammonium sorbate; and

the balance solvent;

the composition having a pH of about 5-6.5, and the % by weight based on the total weight of the cleaning composition.

55. (currently amended) A cleaning composition for a semiconductor surface, consisting essentially of: an acidic aqueous solution comprising a cleaning agent selected from the group consisting of citric acid and citric acid salts, [;] one or more antimicrobial agents in an amount effective to inhibit microbial growth in the cleaning composition and selected from the group

consisting of a benzoic acid, benzoic acid salts, sorbic acid [[,]] and sorbic acid salts, [[;]] solvent comprising water at about 90-99 % by wt, and an amount of a pH buffering agent for a pH of about 5-6.5, the % by wt based on the total weight of the composition.

56. (original) The cleaning composition of Claim 55, wherein the cleaning agent is a selected from the group consisting of citric acid, ammonium citrate, and tetraalkylammonium citrate.

57. (original) The cleaning composition of Claim 55, wherein the antimicrobial agent is selected from the group consisting of benzoic acid, sorbic acid, potassium benzoate, ammonium benzoate, tetraalkylammonium benzoate, potassium sorbate, ammonium sorbate, and tetraalkylammonium sorbate.

58. (original) The cleaning composition of Claim 55, comprising ammonium citrate, potassium benzoate, and potassium sorbate.

59. (original) The cleaning composition of Claim 55, comprising ammonium citrate, ammonium benzoate, and potassium sorbate.

60. (currently amended) A cleaning composition for a semiconductor surface comprising an acidic aqueous solution consisting essentially of: about 0.02 to about 1.5 % by weight citric acid, citric acid salt, or a mixture thereof, about 0.005 to about 0.3 % by weight antimicrobial agent, and solvent comprising water, the % by wt based on the total weight of the cleaning composition; the antimicrobial agent selected from the group consisting of benzoic acid, sorbic acid, potassium benzoate, ammonium benzoate, tetraalkylammonium benzoate, potassium sorbate, ammonium sorbate, tetraalkylammonium sorbate, methylparahydroxybenzoate, ethylparahydroxybenzoate, propylparahydroxybenzoate, and n-heptylparahydroxybenzoate, sulfur dioxide, potassium bisulfite, and potassium metabisulfite, and an amount of a pH buffering agent for a pH of about 5-6.5.

61. (canceled)

62. (currently amended) A cleaning composition for cleaning a planarized or polished surface of a semiconductor wafer, the composition consisting essentially of:

a mixture of about 0.02-1.5 % by wt of a cleaning agent, an antimicrobial agent selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, and about 90-99 % by wt solvent in amounts relative to one another to ~~formulate an effective cleaning composition such that to effectively inhibit~~ microbial growth within the cleaning composition is inhibited, and an amount of a pH buffering agent for a pH of about 5-6.5:

wherein, when the composition is in contact with both a metal conductive structure material and a dielectric layer material on the surface of the wafer, the composition is capable of removing residual particles are removed therefrom from said surface of the wafer with no significant defects to the conductive structure metal material or the dielectric layer material, and inhibiting microbial deposition on the planarized or polished surface is inhibited, and an amount of a pH buffering agent for a pH of about 5-6.5, the % by wt based on the total weight of the composition.

63. (currently amended) The cleaning composition of Claim 62, wherein ~~the amount of the cleaning agent is about 0.02 % to about 1.5 %, the cleaning agent comprising a~~ comprises hydroxycarboxylic acid, a hydroxycarboxylic acid salt, or a mixture thereof.

64. (original) The cleaning composition of Claim 63, wherein the cleaning agent comprises citric acid, citric acid salt, or a mixture thereof.

65. (previously presented) The cleaning composition of Claim 62, wherein the amount of the antimicrobial agent is about 0.005 % to about 0.3 %.

66. (original) The cleaning composition of Claim 62, wherein the antimicrobial agent is selected from the group consisting of benzoic acid, sorbic acid, potassium benzoate, ammonium benzoate, tetraalkylammonium benzoate, potassium sorbate, ammonium sorbate, tetraalkylammonium sorbate, benzoic acid, sorbic acid, ammonium benzoate, potassium

benzoate, tetraalkylammonium benzoate, ammonium sorbate, potassium sorbate, and tetraalkylammonium sorbate.

67-69. (canceled)

70. (original) The cleaning composition of Claim 62, wherein the solvent comprises water, an organic solvent, or a mixture thereof.

71. (original) The cleaning composition of Claim 62, wherein the solvent comprises deionized water.

72-73. (canceled)

74. (withdrawn – currently amended) The cleaning composition of Claim 62, wherein the metal conductive structure material on the surface of the wafer comprises a metal selected from the group consisting of copper, aluminum, silver, tungsten, platinum, titanium, and tantalum.

75. (withdrawn - currently amended) The cleaning composition of Claim 62, wherein the dielectric layer comprises a dielectric material on the surface of the wafer is selected from the group consisting of silicon dioxide, phosphosilicate glass, borosilicate glass, borophosphosilicate glass, carbon-doped silica, and porous silica.

76. (canceled)

77. (currently amended) The cleaning composition of Claim 62, wherein the composition is capable of dispersing residual metal particles [[are]] selected from the group consisting of copper, aluminum, platinum, titanium, silver, tungsten, and tantalum particles.

78. (withdrawn - currently amended) The cleaning composition of Claim 62, wherein the composition is capable of dispersing residual particles comprise abrasive slurry particles.

79. (withdrawn - currently amended) The cleaning composition of Claim 78, wherein the composition is capable of dispersing abrasive slurry particles [[are]] selected from the group consisting of aluminum oxide, titanium dioxide, silicon dioxide, cerium dioxide, and mixtures thereof.

80-138. (canceled)

139. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent and at least one antimicrobial agent at about 0.005-0.3 % by wt and selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, effective amounts of at least one of a surfactant, buffering agent, corrosion inhibitor, chelating agent, oxidizing agent $[[,]]$ and antioxidant $[[;]]$ and about 90-99 % by wt of a solvent, and an amount of a pH buffering agent for a pH of about 5-6.5, the % by wt based on the total weight of the composition.

140. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent and at least one antimicrobial agent at about 0.005-0.3 % by wt and selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, effective amounts of at least one of a surfactant, buffering agent, corrosion inhibitor, chelating agent, oxidizing agent $[[,]]$ and antioxidant; and about 90-99 % by wt of solvent comprising water, and an amount of a pH buffering agent for a pH of about 5-6.5, the % by wt based on the total weight of the composition; wherein microbial growth within the cleaning composition is inhibited and, upon contact with the substrate, contaminants on the substrate are dispersed within the composition.

141. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of about 0.02-1.5 % by wt of a cleaning agent, about 0.005-0.3 % by wt of an antimicrobial agent selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, and about 90-99 % by wt solvent to formulate an effective cleaning composition for removing remove residual particles from the substrate and inhibiting microbial

deposition onto the substrate, and an amount of a pH buffering agent for a pH of about 5-6.5, the % by wt based on the total weight of the composition.

142. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent, antimicrobial agent at about 0.005-0.3 % by wt and selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, and solvent at about 90-99 % by wt, and an amount of a pH buffering agent for a pH of about 5-6.5, the % by wt based on the total weight of the composition; wherein the composition is effective to remove formulate an effective cleaning composition for removal of residual particles from the substrate, the residual particles comprising at least one of residual metal particles, abrasive particles, and dielectric particles, and an amount of a pH buffering agent for a pH of about 5-6.5.

143. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent at about 0.02-1.5 % by wt, antimicrobial agent selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, and solvent at about 90-99 % by wt, and an amount of a pH buffering agent for a pH of about 5-6.5, the % by wt based on the total weight of the composition; wherein the composition is effective to remove formulate an effective cleaning composition for removal of residual particles from the substrate, the residual particles comprising at least one of metal particles and abrasive particles, and an amount of a pH buffering agent for a pH of about 5-6.5.

144. (currently amended) The cleaning composition of Claim 143, wherein the composition is effective to remove residual particles comprise residual metal particles selected from the group consisting of copper particles, aluminum particles, platinum particles, titanium particles, and tantalum particles.

145. (withdrawn - currently amended) The cleaning composition of Claim 143, wherein the wherein the composition is effective to remove residual particles comprise abrasive particles selected from the group consisting of aluminum oxide particles, titanium dioxide particles, silicon dioxide particles, and cerium dioxide particles.

146. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent, antimicrobial agent selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, an amount of a pH buffering agent for a pH of about 5-6.5, and about 90-99% by weight solvent to formulate an effective cleaning composition for removing effectively remove residual particles from the substrate and inhibiting inhibit microbial deposition onto the substrate when applied thereto, the % by wt based on the total weight of the composition, and an amount of a pH buffering agent for a pH of about 5-6.5.

147. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent, antimicrobial agent selected from the group consisting of benzoic acid, sorbic acid, and salts thereof, buffering agent, and about 90-99 % by wt solvent to formulate an effective cleaning composition for removing effectively remove residual particles from the substrate and inhibiting inhibit microbial deposition onto the substrate when applied thereto, the composition having a pH of about 5-6.5, and the % by wt based on the total weight of the composition.

148. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent and at least one antimicrobial agent selected from the group consisting of benzoic acid, sorbic acid, and salts thereof; effective amounts of at least one of a surfactant, buffering agent, corrosion inhibitor, chelating agent, oxidizing agent, and antioxidant; and solvent at about 90-99 % by wt, to formulate an effective cleaning composition for removal of effectively remove residual particles from the substrate and inhibiting inhibit microbial deposition onto the substrate when applied thereto, the composition having a pH of about 5-6.5, and the % by wt based on the total weight of the composition.

149. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent, antimicrobial agent, and about 90-99% by weight solvent, and an amount of a pH buffering agent for a pH of about 5-6.5 to effectively remove formulate an effective cleaning composition for removing residual particles from the substrate and inhibiting inhibit microbial deposition onto the substrate, and an amount of a pH buffering agent for a pH of about 5-6.5, and the antimicrobial agent consisting essentially of a

mixture of sorbic acid or salt thereof and benzoic acid or salt thereof, the % by wt based on the total weight of the composition.

150. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent at about 0.02-1.5 % by wt, antimicrobial agent at about 0.005-0.3 % by wt, buffering agent, and solvent at about 90-99 % by wt to effectively remove formulate an effective cleaning composition for removing residual particles from the substrate and inhibiting inhibit microbial deposition onto the substrate, the composition having a pH of about 5-6.5, and the antimicrobial consisting essentially of a mixture of sorbic acid or salt thereof and benzoic acid or salt thereof, the % by wt based on the total weight of the composition.

151. (currently amended) A cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent and at least one antimicrobial agent at about 0.005-0.3 % by wt; effective amounts of at least one of a surfactant, buffering agent, corrosion inhibitor, chelating agent, oxidizing agent, and antioxidant; and solvent at about 90-99 % by wt, to formulate an effective cleaning composition for removal of residual particles from the substrate and inhibiting microbial deposition onto the substrate, the composition having a pH of about 5-6.5, and the antimicrobial agent consisting essentially of a mixture of sorbic acid or salt thereof and benzoic acid or salt thereof, the % by wt based on the total weight of the composition; wherein microbial growth within the cleaning composition is inhibited and, upon contact with the substrate, contaminants on the substrate are dispersed within the composition.

152. (withdrawn - currently amended) An aqueous cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent, antimicrobial agent at about 0.005-0.3 % by wt, and about 90-99% by weight of a solvent comprising an organic solvent to formulate an effective cleaning composition for removing residual particles from the substrate and inhibiting microbial deposition onto the substrate, and an amount of a pH buffering agent for a pH of about 5-6.5, and the antimicrobial consisting essentially of a mixture of sorbic acid or salt thereof and benzoic acid or salt thereof, the % by wt based on the total weight of the

composition; wherein microbial growth within the cleaning composition is inhibited and, upon contact with the substrate, contaminants on the substrate are dispersed within the composition.

153. (withdrawn) The composition of Claim 152, wherein the organic solvent is selected from the group consisting of methanol, ethanol, n-propanol, iso-propanol, n-butanol, t-butanol, and sec-butanol.

154. (withdrawn) The composition of Claim 152, wherein the organic solvent is selected from the group consisting of ethylene glycol and propylene glycol.

155. (withdrawn - currently amended) An aqueous cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent, antimicrobial agent, buffering agent, and about 90-99% by weight solvent comprising an organic solvent, to formulate an effective cleaning composition for removing residual particles from the substrate and inhibiting microbial deposition onto the substrate, the composition having a pH of about 5-6.5, and the antimicrobial consisting essentially of a mixture of sorbic acid or salt thereof and benzoic acid or salt thereof, the % by wt based on the total weight of the composition; wherein microbial growth within the cleaning composition is inhibited and, upon contact with the substrate, contaminants on the substrate are dispersed within the composition.

156. (withdrawn - currently amended) An aqueous cleaning composition for a semiconductor substrate, consisting essentially of: effective amounts of a cleaning agent and at least one antimicrobial agent; effective amounts of at least one of a surfactant, buffering agent, corrosion inhibitor, chelating agent, oxidizing agent, and antioxidant; and about 90-99% by weight solvent comprising an organic solvent, to formulate an effective cleaning composition for removal of residual particles from the substrate and inhibiting microbial deposition onto the substrate, the composition having a pH of about 5-6.5, and the antimicrobial consisting essentially of a mixture of sorbic acid or salt thereof and benzoic acid or salt thereof, the % by wt based on the total weight of the composition; wherein microbial growth within the cleaning composition is inhibited and, upon contact with the substrate, contaminants on the substrate are dispersed within the composition.